ABSTRACT

A process for converting gaseous alkanes to liquid hydrocarbons wherein a gaseous feed containing alkanes is reacted with a dry bromine vapor to form alkyl bromides and hydrobromic acid vapor. The mixture of alkyl bromides and hydrobromic acid are then reacted over a synthetic crystalline alumino-silicate catalyst, such as a ZSM-5 zeolite, at a temperature of from about 150° C. to about 400° C. so as to form higher molecular weight hydrocarbons and hydrobromic acid vapor. Hydrobromic acid vapor is removed from the higher molecular weight hydrocarbons. A portion of the propane and butane is removed from the higher molecular weight hydrocarbons and reacted with the mixture of alkyl bromides and hydrobromic acid over the synthetic crystalline alumino-silicate catalyst to form C_5+ hydrocarbons.